

## **RAW SEQUENCE LISTING**

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Application Serial Number: 10/535,223  
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DATE: 06/20/2006

PATENT APPLICATION: US/10/535,223

TIME: 13:29:35

Input Set : A:\24918123.APP

Output Set: N:\CRF4\06202006\J535223.raw

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3 <110> APPLICANT: FUKUI, YOSHINORI
4   SASAZUKI, TAKEHIKO
6 <120> TITLE OF INVENTION: FUNCTIONAL DOMAIN AND ASSOCIATED MOLECULE OF DOCK2
7   ESSENTIALLY REQUIRED IN LYMPHOCYTE MIGRATION
9 <130> FILE REFERENCE: 024918-0123
11 <140> CURRENT APPLICATION NUMBER: 10/535,223
12 <141> CURRENT FILING DATE: 2005-05-17
14 <150> PRIOR APPLICATION NUMBER: PCT/JP03/014538
15 <151> PRIOR FILING DATE: 2003-11-14
17 <150> PRIOR APPLICATION NUMBER: JP 2002-342683
18 <151> PRIOR FILING DATE: 2002-11-26
20 <160> NUMBER OF SEQ ID NOS: 8
22 <170> SOFTWARE: PatentIn Ver. 3.3
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 1828
26 <212> TYPE: PRT
27 <213> ORGANISM: Mus musculus
29 <400> SEQUENCE: 1
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33 Tyr Asn Phe Gln Gly Ser Glu Ala Gln His Leu Thr Leu Gln Ile Gly
34             20             25             30
36 Asp Val Val Arg Ile Gln Glu Thr Cys Gly Asp Trp Tyr Arg Gly Tyr
37             35             40             45
39 Leu Ile Lys His Lys Leu Ser Gln Gly Ile Phe Pro Thr Ser Phe Ile
40             50             55             60
42 His Leu Lys Glu Val Thr Val Glu Lys Arg Arg Asn Ile Glu Asn Ile
43   65             70             75             80
45 Ile Pro Ala Glu Ile Pro Leu Ala Gln Glu Val Thr Thr Thr Leu Trp
46             85             90             95
48 Glu Trp Gly Ser Ile Trp Lys Gln Leu Tyr Val Ala Ser Lys Lys Glu
49             100            105            110
51 Arg Phe Leu Gln Val Gln Ser Met Met Tyr Asp Leu Met Glu Trp Arg
52             115            120            125
54 Ser Gln Leu Leu Ser Gly Thr Leu Pro Lys Asp Glu Leu Lys Glu Leu
55             130            135            140
57 Lys Gln Lys Val Thr Ser Lys Ile Asp Tyr Gly Asn Lys Ile Leu Glu
58   145            150            155            160
60 Leu Asp Leu Ile Val Arg Asp Glu Asp Gly Asn Ile Leu Asp Pro Asp
61             165            170            175
63 Lys Thr Ser Val Ile Ser Leu Phe His Ala His Glu Glu Ala Thr Tyr
64             180            185            190
66 Lys Ile Thr Glu Arg Ile Lys Glu Glu Met Ser Lys Asp Gln Pro Asp

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67          195          200          205
69 Tyr Gly Val Tyr Ser Arg Ile Ser Ser Ser Pro Thr His Ser Leu Tyr
70      210          215          220
72 Val Phe Val Arg Asn Phe Val Cys Arg Ile Gly Glu Asp Ala Glu Leu
73 225          230          235          240
75 Phe Met Ser Leu Tyr Asp Pro His Lys Gln Thr Val Ile Ser Glu Asn
76      245          250          255
78 Tyr Leu Val Arg Trp Gly Ser Lys Gly Phe Pro Lys Glu Ile Glu Met
79      260          265          270
81 Leu Asn Asn Leu Lys Val Val Phe Thr Asp Leu Gly Asn Lys Asp Leu
82      275          280          285
84 Asn Arg Asp Lys Ile Phe Leu Ile Cys Gln Ile Val Arg Ile Gly Lys
85      290          295          300
87 Met Asp Leu Lys Asp Ile Asn Ala Lys Lys Cys Thr Gln Gly Leu Arg
88 305          310          315          320
90 Arg Pro Phe Gly Val Ala Val Met Asp Ile Thr Asp Ile Ile Lys Gly
91      325          330          335
93 Lys Ala Glu Ser Asp Glu Glu Lys Gln His Phe Ile Pro Phe His Pro
94      340          345          350
96 Val Ser Ala Glu Asn Asp Phe Leu His Ser Leu Leu Gly Lys Val Ile
97      355          360          365
99 Ala Ser Lys Gly Asp Ser Gly Gly Gln Gly Leu Trp Val Thr Met Lys
100      370          375          380
102 Met Leu Val Gly Asp Ile Ile Gln Ile Arg Lys Asp Tyr Pro His Leu
103 385          390          395          400
105 Val Asp Arg Thr Thr Val Val Ala Arg Lys Leu Gly Phe Pro Glu Ile
106      405          410          415
108 Ile Met Pro Gly Asp Val Arg Asn Asp Ile Tyr Ile Thr Leu Leu Gln
109      420          425          430
111 Gly Asp Phe Asp Lys Tyr Thr Lys Thr Thr Gln Arg Asn Val Glu Val
112      435          440          445
114 Ile Met Cys Val Cys Thr Glu Asp Gly Lys Val Leu Pro Asn Ala Ile
115      450          455          460
117 Cys Val Gly Ala Gly Asp Lys Ala Met Asn Glu Tyr His Ser Val Val
118 465          470          475          480
120 Tyr Tyr Gln Val Lys Gln Pro Arg Trp Met Glu Thr Val Lys Val Ala
121      485          490          495
123 Val Pro Ile Glu Asp Met Gln Arg Ile His Leu Arg Phe Met Phe Arg
124      500          505          510
126 His Arg Ser Ser Leu Glu Ser Lys Asp Lys Gly Glu Lys Asn Phe Ala
127      515          520          525
129 Met Ser Tyr Val Lys Leu Met Lys Glu Asp Gly Thr Thr Leu His Asp
130      530          535          540
132 Gly Tyr His Glu Leu Val Val Leu Lys Gly Asp Ser Lys Lys Met Glu
133 545          550          555          560
135 Asp Ala Ser Ala Tyr Leu Thr Leu Pro Ser Tyr Arg His Pro Val Glu
136      565          570          575
138 Asn Lys Gly Ala Thr Leu Ser Arg Ser Ser Ser Ser Val Gly Gly Leu
139      580          585          590

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141 Ser Val Ser Ser Arg Asp Val Phe Ser Ile Ser Thr Leu Val Cys Ser
142          595          600          605
144 Thr Lys Leu Thr Gln Asn Val Gly Leu Leu Gly Leu Leu Lys Trp Arg
145          610          615          620
147 Met Lys Pro Gln Leu Leu Gln Glu Asn Leu Glu Lys Leu Lys Ile Val
148 625          630          635          640
150 Asp Gly Glu Glu Val Val Lys Phe Leu Gln Asp Thr Leu Asp Ala Leu
151          645          650          655
153 Phe Asn Ile Met Met Glu His Ser Gln Ser Asn Glu Tyr Asp Ile Leu
154          660          665          670
156 Val Phe Asp Ala Leu Ile Tyr Ile Ile Gly Leu Ile Ala Asp Arg Lys
157          675          680          685
159 Phe Gln His Phe Asn Thr Val Leu Glu Ala Tyr Ile Gln Gln His Phe
160          690          695          700
162 Ser Ala Thr Leu Ala Tyr Lys Lys Leu Met Thr Val Leu Lys Thr Tyr
163 705          710          715          720
165 Leu Asp Thr Ser Ser Arg Gly Glu Gln Cys Glu Pro Ile Leu Arg Thr
166          725          730          735
168 Leu Lys Ala Leu Glu Tyr Val Phe Lys Phe Ile Val Arg Ser Arg Thr
169          740          745          750
171 Leu Phe Ser Gln Leu Tyr Glu Gly Lys Glu Gln Met Glu Phe Glu Glu
172          755          760          765
174 Ser Met Arg Arg Leu Phe Glu Ser Ile Asn Asn Leu Met Lys Ser Gln
175          770          775          780
177 Tyr Lys Thr Thr Ile Leu Leu Gln Val Ala Ala Leu Lys Tyr Ile Pro
178 785          790          795          800
180 Ser Val Leu His Asp Val Glu Thr Val Phe Asp Ala Lys Leu Leu Ser
181          805          810          815
183 Gln Leu Leu Tyr Glu Phe Tyr Thr Cys Ile Pro Pro Val Lys Leu Gln
184          820          825          830
186 Lys Gln Lys Val Gln Ser Met Asn Glu Ile Val Gln Ser Asn Leu Phe
187          835          840          845
189 Lys Lys Gln Glu Cys Arg Asp Ile Leu Leu Pro Val Ile Thr Lys Glu
190          850          855          860
192 Leu Lys Glu Leu Leu Glu Gln Arg Asp Asp Gly Gln His Gln Ala Glu
193 865          870          875          880
195 Lys Lys His Cys Val Glu Leu Leu Asn Ser Ile Leu Glu Val Leu Ser
196          885          890          895
198 Cys Gln Asp Ala Ala Phe Thr Tyr Asp His Ile Gln Glu Ile Met Val
199          900          905          910
201 Gln Leu Leu Arg Thr Val Asn Arg Thr Val Ile Thr Met Gly Arg Asp
202          915          920          925
204 His Ala Leu Ile Ser His Phe Glu Ala Cys Met Thr Ala Ile Leu Asp
205          930          935          940
207 Gln Met Gly Asp Gln His Tyr Ser Phe Tyr Ile Glu Thr Phe Gln Thr
208 945          950          955          960
210 Ser Ser Asp Leu Val Asp Phe Leu Met Glu Thr Phe Ile Met Phe Lys
211          965          970          975
213 Asp Leu Ile Gly Lys Asn Val Tyr Pro Gly Asp Trp Met Ala Met Ser

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214          980          985          990
216 Met Val Gln Asn Arg Val Phe Leu Arg Ala Ile Asn Lys Phe Ala Glu
217          995          1000          1005
219 Thr Met Asn Gln Lys Phe Leu Glu His Thr Ser Phe Glu Phe Gln Leu
220      1010          1015          1020
222 Trp Asn Asn Tyr Phe His Leu Ala Val Ala Phe Ile Thr Gln Asp Ser
223 1025          1030          1035          1040
225 Leu Gln Leu Glu Gln Phe Thr His Ala Lys Tyr Asn Lys Ile Leu Asn
226          1045          1050          1055
228 Lys Tyr Gly Asp Met Arg Arg Leu Ile Gly Phe Ser Ile Arg Asp Met
229          1060          1065          1070
231 Trp Tyr Lys Leu Gly Gln Asn Lys Ile Cys Phe Ile Pro Gly Met Val
232          1075          1080          1085
234 Gly Pro Ile Leu Glu Met Thr Leu Ile Pro Glu Ala Glu Leu Arg Lys
235      1090          1095          1100
237 Ala Thr Ile Pro Ile Phe Phe Asp Met Met Leu Cys Glu Tyr Gln Arg
238 1105          1110          1115          1120
240 Thr Gly Ala Phe Lys Lys Phe Glu Asn Glu Ile Ile Leu Lys Leu Asp
241          1125          1130          1135
243 His Glu Val Glu Gly Gly Arg Gly Asp Glu Gln Tyr Met Gln Leu Leu
244          1140          1145          1150
246 Glu Ser Ile Leu Met Glu Cys Thr Ala Glu His Pro Thr Ile Ala Lys
247      1155          1160          1165
249 Ser Val Glu Asn Phe Val Ser Leu Val Lys Gly Leu Leu Glu Lys Leu
250      1170          1175          1180
252 Leu Asp Tyr Arg Gly Val Met Thr Asp Glu Ser Lys Asp Asn Arg Met
253 1185          1190          1195          1200
255 Ser Cys Thr Val Asn Leu Leu Asn Phe Tyr Lys Asp Asn Asn Arg Glu
256          1205          1210          1215
258 Glu Met Tyr Ile Arg Tyr Leu Tyr Lys Leu Arg Asp Leu His Leu Asp
259          1220          1225          1230
261 Cys Glu Asn Tyr Thr Glu Ala Ala Tyr Thr Leu Leu Leu His Thr Trp
262      1235          1240          1245
264 Leu Leu Lys Trp Ser Asp Glu Gln Cys Ala Ser Gln Val Met Gln Thr
265      1250          1255          1260
267 Gly Gln Gln His Pro Gln Thr His Arg Gln Leu Lys Glu Thr Leu Tyr
268 1265          1270          1275          1280
270 Glu Thr Ile Ile Gly Tyr Phe Asp Lys Gly Lys Met Trp Glu Glu Ala
271          1285          1290          1295
273 Ile Ser Leu Cys Lys Glu Leu Ala Glu Gln Tyr Glu Met Glu Ile Phe
274          1300          1305          1310
276 Asp Tyr Glu Leu Leu Ser Gln Asn Leu Thr Gln Gln Ala Lys Phe Tyr
277      1315          1320          1325
279 Glu Asn Ile Met Lys Ile Leu Arg Thr Lys Pro Asp Tyr Phe Ala Val
280      1330          1335          1340
282 Gly Tyr Tyr Gly Gln Gly Phe Pro Ser Phe Leu Arg Asn Lys Val Phe
283 1345          1350          1355          1360
285 Ile Tyr Arg Gly Lys Glu Tyr Glu Arg Arg Glu Asp Phe Gln Met Gln
286          1365          1370          1375

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288 Leu Leu Ser Gln Phe Pro Asn Ala Glu Lys Met Asn Thr Thr Ser Ala
289           1380           1385           1390
291 Pro Gly Asp Asp Val Arg Asn Ala Pro Gly Gln Tyr Ile Gln Cys Phe
292           1395           1400           1405
294 Thr Val Gln Pro Val Leu Asp Glu His Pro Arg Phe Lys Asn Lys Pro
295           1410           1415           1420
297 Val Pro Asp Gln Ile Ile Asn Phe Tyr Lys Ser Asn Tyr Val Gln Lys
298 1425           1430           1435           1440
300 Phe His Tyr Ser Arg Pro Val Arg Arg Gly Lys Val Asp Pro Glu Asn
301           1445           1450           1455
303 Glu Phe Ala Ser Met Trp Ile Glu Arg Thr Ser Phe Leu Thr Ala Tyr
304           1460           1465           1470
306 Lys Leu Pro Gly Ile Leu Arg Trp Phe Glu Val Val His Met Ser Gln
307           1475           1480           1485
309 Thr Thr Ile Ser Pro Leu Glu Asn Ala Ile Glu Thr Met Ser Thr Val
310           1490           1495           1500
312 Asn Glu Lys Ile Leu Met Met Ile Asn Gln Tyr Gln Ser Asp Glu Ser
313 1505           1510           1515           1520
315 Leu Pro Ile Asn Pro Leu Ser Met Leu Leu Asn Gly Ile Val Asp Pro
316           1525           1530           1535
318 Ala Val Met Gly Gly Phe Ala Lys Tyr Glu Lys Ala Phe Phe Thr Glu
319           1540           1545           1550
321 Glu Tyr Ser Arg Glu His Pro Glu Asp Gln Asp Lys Leu Ser His Leu
322           1555           1560           1565
324 Lys Asp Leu Ile Ala Trp Gln Ile Pro Phe Leu Gly Ala Gly Ile Lys
325           1570           1575           1580
327 Ile His Glu Lys Arg Val Ser Asp Asn Leu Arg Pro Phe His Asp Arg
328 1585           1590           1595           1600
330 Met Glu Glu Cys Phe Lys Asn Leu Lys Met Lys Val Glu Lys Glu Tyr
331           1605           1610           1615
333 Gly Val Arg Glu Met Pro Asp Phe Glu Asp Arg Arg Val Gly Arg Pro
334           1620           1625           1630
336 Arg Ser Met Leu Arg Ser Tyr Arg Gln Met Ser Val Ile Ser Leu Ala
337           1635           1640           1645
339 Ser Met His Ser Asp Cys Ser Thr Pro Ser Lys Val Pro Ala Glu Ser
340           1650           1655           1660
342 Phe Asp Leu Glu Ser Ala Pro Pro Lys Thr Pro Lys Val Glu Glu Glu
343 1665           1670           1675           1680
345 Pro Ile Ser Pro Gly Ser Thr Leu Pro Glu Val Lys Leu Arg Arg Ser
346           1685           1690           1695
348 Lys Lys Arg Thr Lys Arg Ser Ser Val Val Phe Ala Asp Glu Lys Ala
349           1700           1705           1710
351 Ala Thr Glu Ser Asp Leu Lys Arg Leu Ser Arg Lys Gln Glu Phe Met
352           1715           1720           1725
354 Ser Asp Thr Asn Leu Ser Glu His Ala Ala Ile Pro Ala Arg Val Ser
355           1730           1735           1740
357 Ile Leu Ser Gln Met Ser Phe Ala Ser Gln Ser Met Pro Thr Ile Pro
358 1745           1750           1755           1760
360 Ala Leu Thr Leu Ser Val Ala Gly Val Pro Gly Leu Asp Glu Ala Asn

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VERIFICATION SUMMARY

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